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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,574	07/25/2003	Hiroyuki Mishima	2003-1015A	9548

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EXAMINER	
BUTTNER, DAVID J	
ART UNIT	**PAPER NUMBER**
1712	

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/626,574	MISHIMA ET AL.	
	Examiner	Art Unit	
	David Buttner	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claims 1-5 and 7-12 rejected under 35 U.S.C. 103(a) as being unpatentable over JP6319114 or EP118031 in view of Nakamura '630.

JP63195114 and EP118031 both disclose a hydrothermally treating aluminum hydroxide. Presumably, this treatment will produce the boehmite because it is the same treatment claimed by applicant. EP118031 discloses the treated aluminum hydroxide is useful in epoxy resins. Oral translation indicates JP63195114 suggests its treated aluminum hydroxide is suitable for epoxy resins also. It does not appear either reference suggests particular epoxy resin enduses.

Aluminum hydroxide filled epoxy resins are known for prepregs. Nakamura (tables) shows such prepreg enduses. It would have been obvious to use the hydrothermally treated aluminum hydroxide filled epoxy resins of J'114 or EP'031 in any common enduse including prepregs.

Claims 1-3 and 8-12 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Brown WO 98/31538.

Brown discloses prepregs of glass, epoxy resin and aluminum hydroxide (page 3 line 6). The aluminum hydroxide contains significant amounts of boehmite (figure 1 ; page 6 line 18). Brown does not teach that the aluminum hydroxide/boehmite was produced by hydrothermally treatment of aluminum hydroxide, but there is no reason to believe the claimed treatment results in a product any different from the conventional aluminum hydroxides/boehmite of the reference. Note that claim 1 places no constraints on the hydrothermal treatment (eg temperature, time) or on the amount of boehmite.

Claims 1-5 and 7-12 rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nakamura '630.

Nakamura exemplifies (tables) prepregs of epoxy resin, aluminum hydroxide, silane coupling agent, hardener etc. Nakamura does not explain how the aluminum hydroxide was made or if there is boehmite present. Conventionally produced aluminum hydroxide has significant amounts of boehmite present (see fig 1 of WO 98/31538. There is no reason to believe applicant's claimed hydrothermal treatment results in a product any different from the conventional aluminum hydroxides of the reference. Note that claim 1 places no constraints on the hydrothermal treatment (eg temperature, time) or on the amount of boehmite.

Claims 1-3,5 and 7-12 rejected under 35 U.S.C. 102(a,b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP2001329080.

The reference discloses a prepreg of cyanate resin, epoxy resin and aluminum hydroxide. The reference does not explain how the aluminum hydroxide was made or if there is boehmite present. Conventionally produced aluminum hydroxide has significant amounts of boehmite present (see fig 1 of WO 98/31538. There is no reason to believe applicant's claimed hydrothermal treatment results in a product any different from the conventional aluminum hydroxide of the reference. Note that claim 1 places no constraints on the hydrothermal treatment (eg temperature, time) or on the amount of boehmite.

Claims 1-5 and 7-12 rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/31538 or Nakamura '630 or JP2001329080 in view of JP63195114 or EP118031.

The previously described primary references do not suggest hydrothermally treating their aluminum hydroxide prior to incorporation into the prepreg.

Both JP63195114 and EP118031 teach such treatments for aluminum hydroxide. JP63195114 teaches the treatment increases solder resistance and decomposition temperature. It would have been obvious to hydrothermally treat the aluminum hydroxide of WO 98/31538 or Nakamura or JP2001329080 for the expected benefits.

Claim 6 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

There does not appear to be reason to add a separately prepared boehmite to the treated aluminum hydroxide/boehmite.

Applicant's arguments filed 8/15/05 have been fully considered but they are not persuasive. Applicant argues the conventional aluminum hydroxide of WO 98/31538 is inferior to the claimed hydrothermally treated aluminum hydroxide.

This is not convincing. The claims do not specify any details of the treatment. Even ambient humidty will make the admitted prior art of heating in air a "hydrothermal treatment". Secondly, applicant's declaration of 8/15/05 can be interpreted as showing the amount of boehmite to the critical factor rather than the hydrothermal treatment. WO 98/31538 (fig 1) shows conventionally produced aluminum hydroxide can have up to

20% boehmite. Applicant has not shown these aluminum hydroxides to be inferior. Note that applicant's claims allow for even tiny amounts of boehmite in the aluminum hydroxide.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is 571-272-1084. The examiner can normally be reached on weekdays from 10 to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAVID J. BUTTNER
PRIMARY EXAMINER

David Buttner

9/7/05